

I claim:

1        1. A coated phosphor comprising a powder, formed by particles, of a  
2 phosphor, the phosphor particles being coated with a vitreous material, wherein the  
3 vitreous material is silicate glass.

1        2. A coated phosphor as claimed in claim 1, wherein the vitreous material is  
2 polymethylsilanol, in particular based on alkylsilicic acid, the alkyl groups being capable,  
3 in particular, of containing up to six carbon atoms.

1        3. A coated phosphor as claimed in claim 1, wherein the phosphor is  
2 selected from the group of garnets, chlorosilicates, thiogallates, nitridosilicates and  
3 aluminates.

1        4. A coated phosphor as claimed in claim 1, wherein the layer thickness is  
2 between 1 nm and 10 µm.

1        5. A light-emitting device having at least one radiation source that emits in  
2 the range of 150 to 600 nm, and having a phosphor layer that converts the light of the  
3 light source at least partially into longer-wave radiation, the phosphor layer being  
4 formed by particles that are coated in accordance with claim 1.

1        6. A method for producing a coated phosphor, with the following method  
2 steps:

3            a) introducing uncoated phosphor powder and organosilanol, in particular  
4 alkylsilicic acid, into organic solvents, in particular ethanol;

5            b) boiling down the solution to evaporate the highly volatile components at a  
6 low temperature T1 in the range of 30 to 55°C;

7            c) distilling off the high-boiling components until vitrified aggregates are  
8 produced at a higher temperature T2 in the range of 55 to 120°C;

9           d)     drying the powder; and  
10          e)     condensing the coating to form silicate glass at an even higher  
11 temperature T3 in the range of 250 to 350°C.